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IN THE CLAIMS:

Please amend claims 7 and 8 as follows:

1. (Previously Presented) A method for arranging orders for printing articles in multiple columns, the method comprising the steps of:

obtaining a plurality of orders, each of the orders containing at least one article to be printed;

sorting the orders according to the number of articles to be printed in each order to produce a sorted arrangement of the orders; and

for each successive order in the sorted arrangement of orders, placing the order in a column which currently has a lowest number of total articles to be printed.

2. (Original) The method of claim 1 further comprising the step of:

placing the first K orders in the sorted arrangement of orders in columns 1 to K where K is the total number of columns.

3. (Previously Presented) The method of claim 1 further comprising the steps of:

determining the number of articles to be printed in a Ith group in an Mth column;

determining the number of articles to be printed in the Mth column;

determining the number of articles to be printed in a Jth group in a Nth column;

determining a number of articles to be printed in the Nth column; and

exchanging the Ith and Jth groups between the Mth and Nth columns if the following boolean expression is true:

$$(L(M) > L(N) \text{ AND } L(I,M) > L(J,N) \text{ AND } L(M)-L(N) > L(I,M)-L(J,N)) \text{ OR}$$
$$(L(M) < L(N) \text{ AND } L(I,M) < L(J,N) \text{ AND } L(N)-L(M) > L(J,N)-L(I,M)),$$

where $L(M)$ is the number of articles to be printed in the Mth column,

$L(N)$ is the number of articles to be printed in the Nth column,

$L(I,M)$ is the number of articles to be printed in the Ith order of the Mth column, and

$L(J,N)$ is the number of articles to be printed in the Jth order of the Nth column.

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4.   (Previously Presented) A method for rearranging a data structure representing a multi column arrangement of a plurality of groups of printed articles, the method comprising the steps of:

        determining the number of printed articles in a Ith group in a Mth column;

        determining the number of printed articles in the Mth column;

        determining the number of printed articles in a Jth group in a Nth column;

        determining a number of printed articles in the Nth column; and

        exchanging the Ith and Jth groups between the Mth and Nth columns if the following boolean expression is true:

$$(L(M)>L(N) \text{ AND } L(I,M)>L(J,N) \text{ AND } L(M)-L(N)>L(I,M)-L(J,N)) \text{ OR}$$

$$(L(M)<L(N) \text{ AND } L(I,M)<L(J,N) \text{ AND } L(N)-L(M)>L(J,N)-L(I,M)),$$

where $L(M)$ is the number of printed articles in the Mth column,

$L(N)$ is the number of printed articles in the Nth column,

$L(I,M)$ is the number of printed articles in the Ith order of the Mth column, and

$L(J,N)$ is the number of printed articles in the Jth order of the Nth column.

5.   (Previously Presented) The method of claim 4 further comprising the step of:

        iteratively selecting different combinations of values of M and N.

6.   (Original) The method of claim 4 further comprising the step of:

        iteratively selecting different combinations of values of I and J.

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7.   (Currently Amended) A computer readable medium ~~containing~~ encoded with
programming instructions for rearranging a data structure representing a multi column
arrangement of a plurality of groups of printed articles, including programming instructions for:

determining the number of printed articles in a Ith group in a Mth column;

determining the number of printed articles in the Mth column;

determining the number of printed articles in a Jth group in a Nth column;

determining a number of printed articles in the Nth column; and

exchanging the Ith and Jth groups between the Mth and Nth columns if the following
boolean expression is true:

$$(L(M)>L(N) \text{ AND } L(I,M)>L(J,N) \text{ AND } L(M)-L(N)>L(I,M)-L(J,N)) \text{ OR}$$

$$(L(M)<L(N) \text{ AND } L(I,M)<L(J,N) \text{ AND } L(N)-L(M)>L(J,N)-L(I,M)),$$

where $L(M)$ is the number of printed articles in the Mth column,

$L(N)$ is the number of printed articles in the Nth column,

$L(I,M)$ is the number of printed articles in the Ith order of the Mth column, and

$L(J,N)$ is the number of printed articles in the Jth order of the Nth column.

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8.   (Currently Amended) A computer readable medium ~~containing~~ encoded with programming instructions for rearranging a data structure representing a multi column arrangement of a plurality of groups of printed matter, the ~~computer readable medium~~ programming instructions including programming instructions for:

determining the number of printed articles in a Ith group in a Mth column;

determining the number of printed articles in the Mth column;

determining the number of printed articles in a Jth group in a Nth column;

determining a number of printed articles in the Nth column; and

exchanging the Ith and Jth groups between the Mth and Nth columns if a boolean expression:

$(L(M)>L(N)$ AND $L(I,M)>L(J,N)$ AND $L(M)-L(N)>L(I,M)-L(J,N))$ OR

$(L(M)<L(N)$ AND $L(I,M)<L(J,N)$ AND $L(N)-L(M)>L(J,N)-L(I,M))$

where $L(M)$ is the number of printed articles in the Mth column,

$L(N)$ is the number of printed articles in the Nth column,

$L(I,M)$ is the number of printed articles in the Ith order of the Mth column, and

$L(J,N)$ is the number of printed articles in the Jth order of the Nth column

is true.

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9.   (Previously Presented) A system for producing custom printed articles, the system comprising:

a high speed printer; and

a server electrically coupled to the high speed printer, the server including:

a processor programmed to:

determine a number of printed articles in a Ith group in a Mth column;

determine a number of printed articles in the Mth column;

determine a number of printed articles in a Jth group in a Nth column;

determine a number of printed articles in the Nth column; and

exchange the Ith and Jth groups between the Mth and Nth columns if the following boolean expression is true:

$$(L(M)>L(N) \text{ AND } L(I,M)>L(J,N) \text{ AND } L(M)-L(N)>L(I,M)-L(J,N)) \text{ OR}$$

$$(L(M)<L(N) \text{ AND } L(I,M)<L(J,N) \text{ AND } L(N)-L(M)>L(J,N)-L(I,M)),$$

where $L(M)$ is the number of printed articles in the Mth column,

$L(N)$ is the number of printed articles in the Nth column,

$L(I,M)$ is the number of printed articles in the Ith order of the Mth column, and

$L(J,N)$ is the number of printed articles in the Jth order of the Nth column.

10.   (Previously Presented) The method of claim 4 further comprising the steps of:

obtaining the plurality of groups of printed articles, each of the groups containing at least one printed article;

sorting the groups according to the number of printed articles in each group to produce a sorted arrangement of the groups; and

for each successive group in the sorted arrangement of groups, placing the group in a column which currently has a lowest number of total printed articles.

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11.   (Previously Presented) The method of claim 10 further comprising the step of:

placing the first K groups in the sorted arrangement of groups in columns 1 to K where K is the total number of columns.

12.   (Previously Presented) The computer readable medium of claim 7 further including programming instructions for:

obtaining the plurality of groups of printed articles, each of the groups containing at least one printed article;

sorting the groups according to the number of printed articles in each group to produce a sorted arrangement of the groups; and

for each successive group in the sorted arrangement of groups, placing the group in a column which currently has a lowest number of total printed articles.

13.   (Previously Presented) The computer readable medium of claim 12 further including programming instructions for:

placing the first K groups in the sorted arrangement of groups in columns 1 to K where K is the total number of columns.

14.   (Previously Presented) The system of claim 9 wherein the processor is further programmed to:

obtain the plurality of groups of printed articles, each of the groups containing at least one printed article;

sort the groups according to the number of printed articles in each group to produce a sorted arrangement of the groups; and

for each successive group in the sorted arrangement of groups, place the group in a column which currently has a lowest number of total printed articles.

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15.   (Previously Presented) The system of claim 14 wherein the processor is further programmed to:

place the first K groups in the sorted arrangement of groups in columns 1 to K where K is the total number of columns.